

# Clean Coal Power Initiative



*National Strategy for  
Clean Coal Technology  
Investments-A Work in  
Progress*

*November 20, 2001*

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**National Energy Technology Laboratory**



[www.netl.doe.gov](http://www.netl.doe.gov)

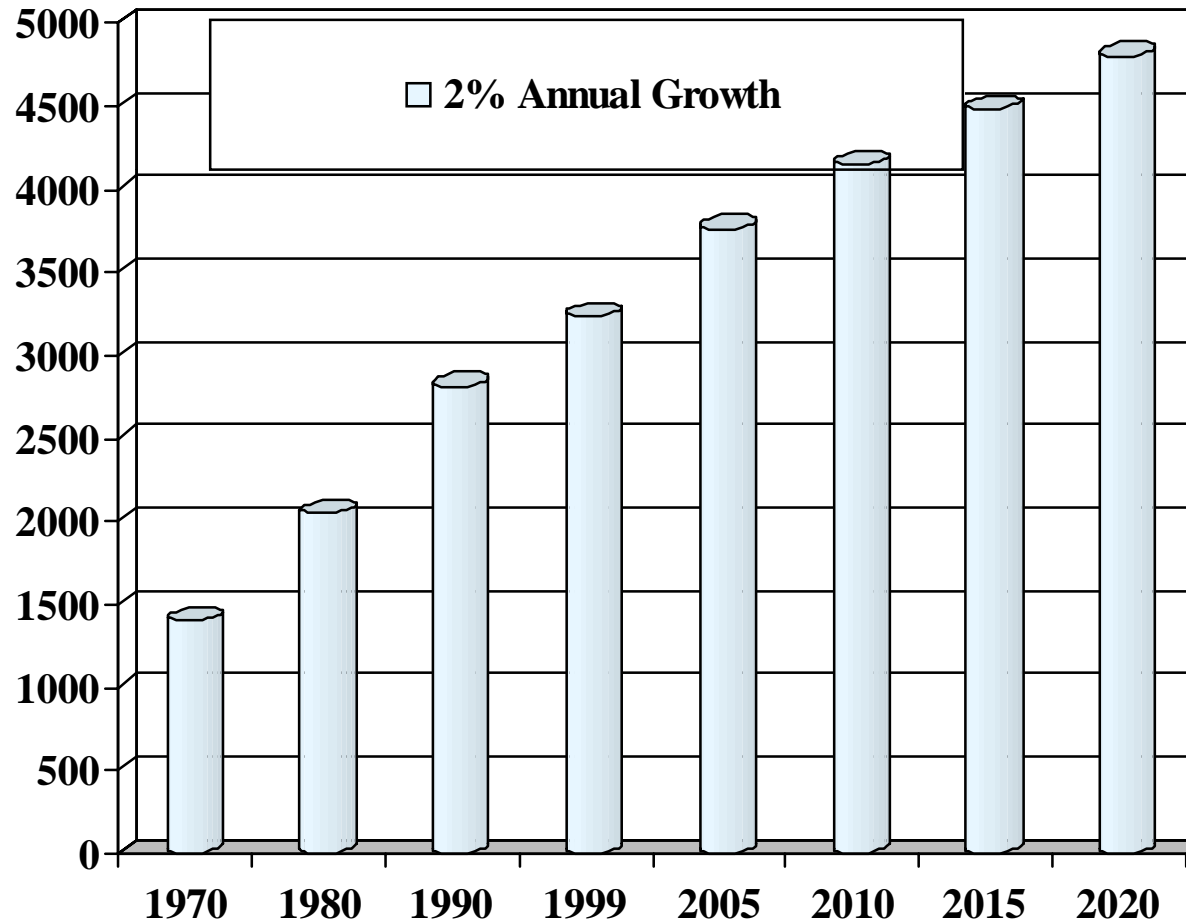


# Impetus for Federal Investment Strategy



# Electricity Use Is Growing

**United State Electricity Demand**  
(Billion kWh)

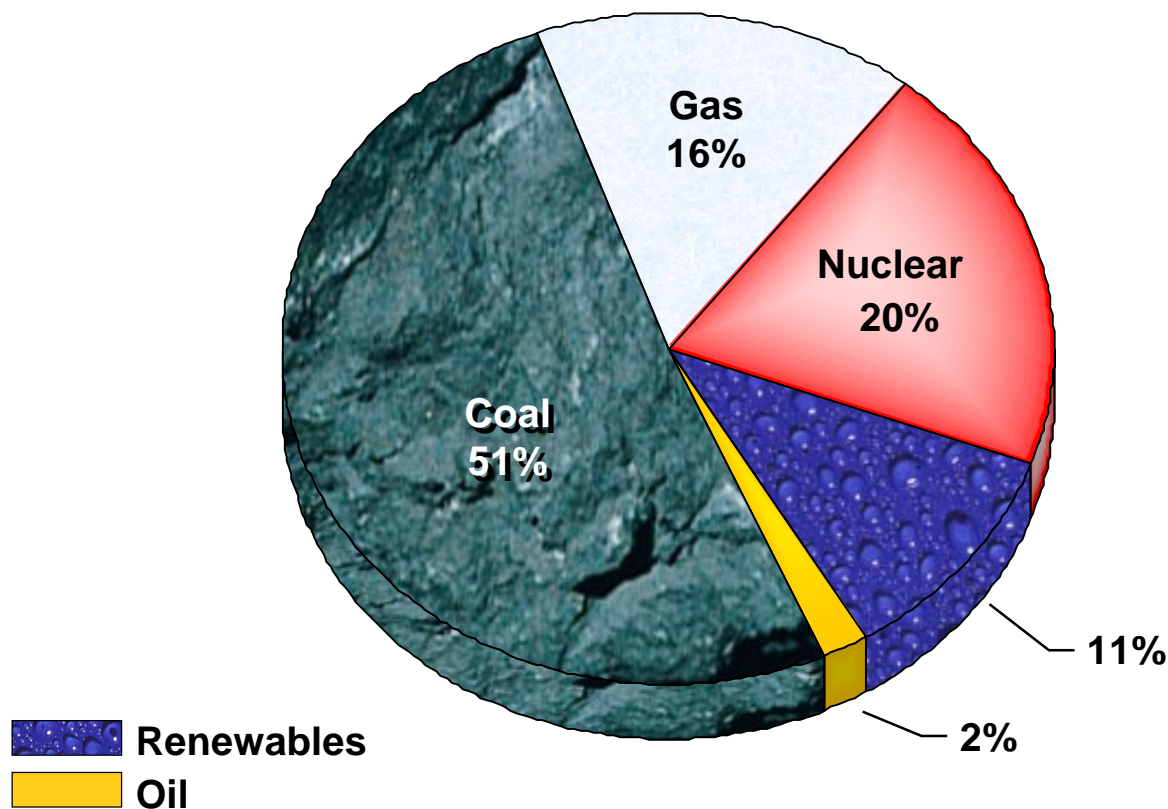


Source: EIA International Energy Outlook 2001



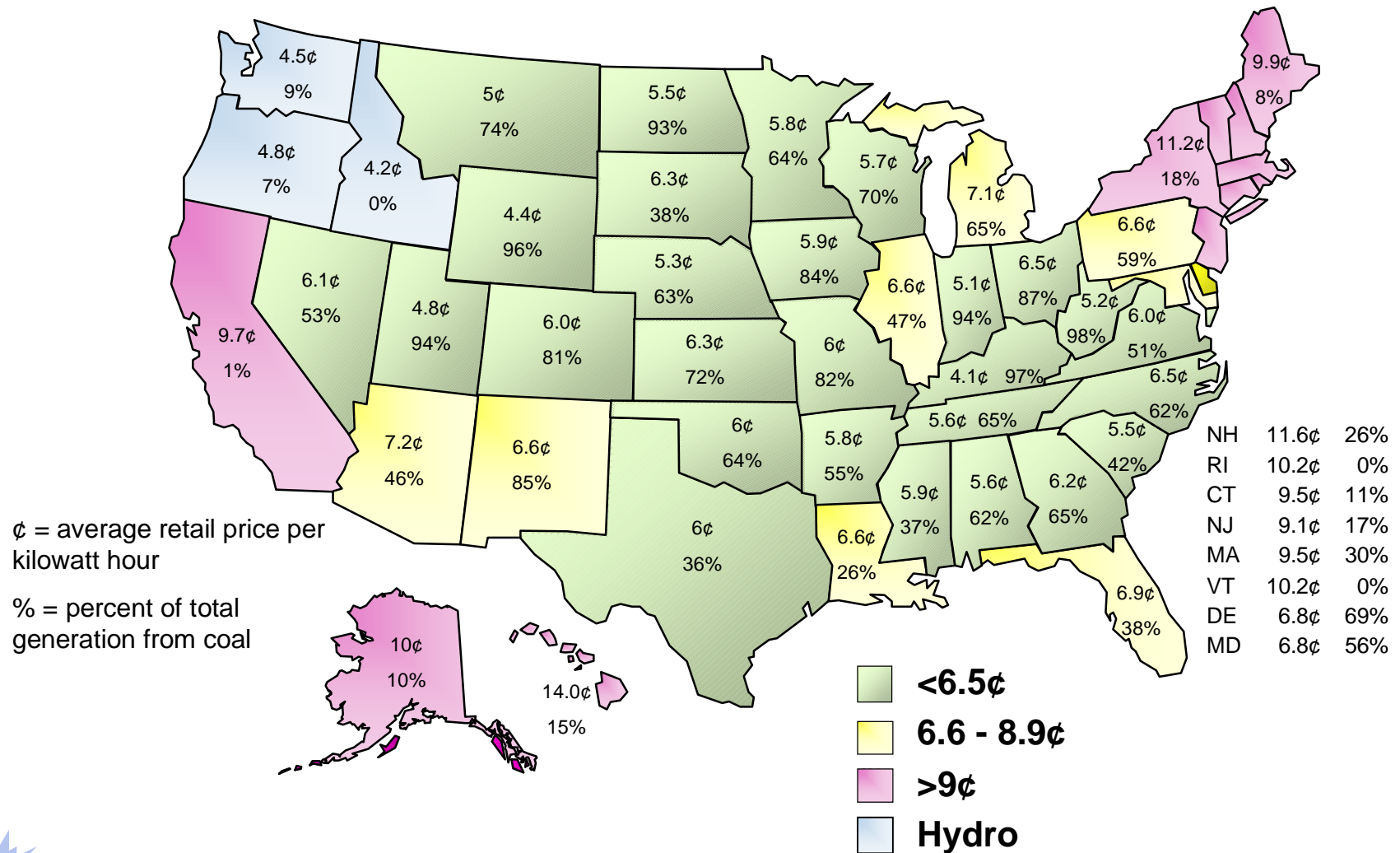
# Coal - Dominant Energy Source for Electricity

**United States - 1999**  
**3.2 Trillion kWh - 69% Fossil Fuels**



*Source: EIA International Energy Outlook 2001  
Edison Electric Institute 2001*

# Coal Use Translates to Secure, Reliable, Affordable Electricity

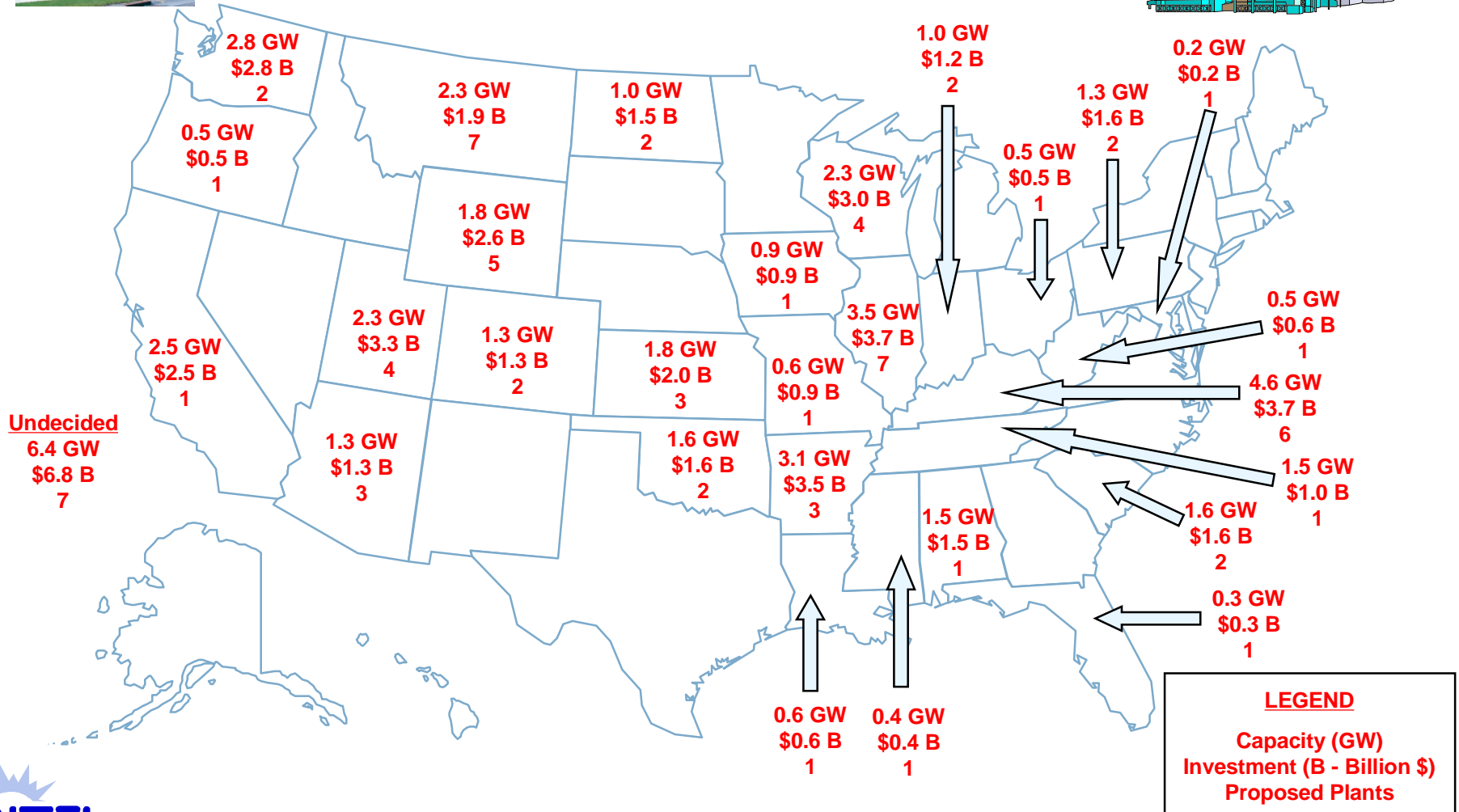
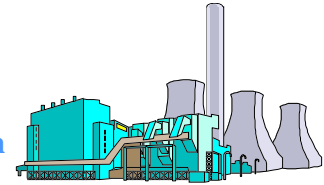


# Coal's Resurgence in Electric Power Generation



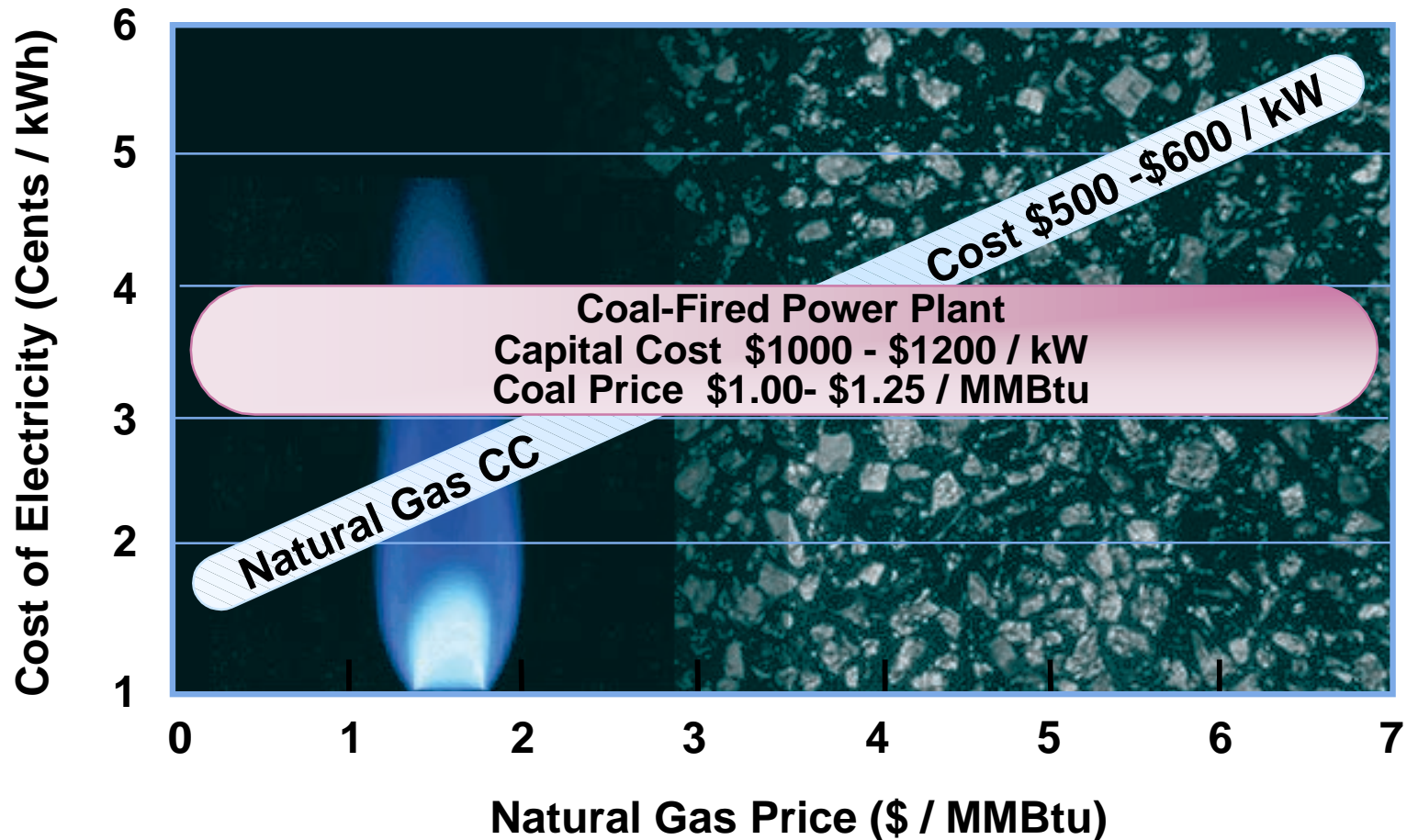
Equivalent Power  
for  
50 Million Homes

75 Plants  
50 GW  
\$ 53 Billion

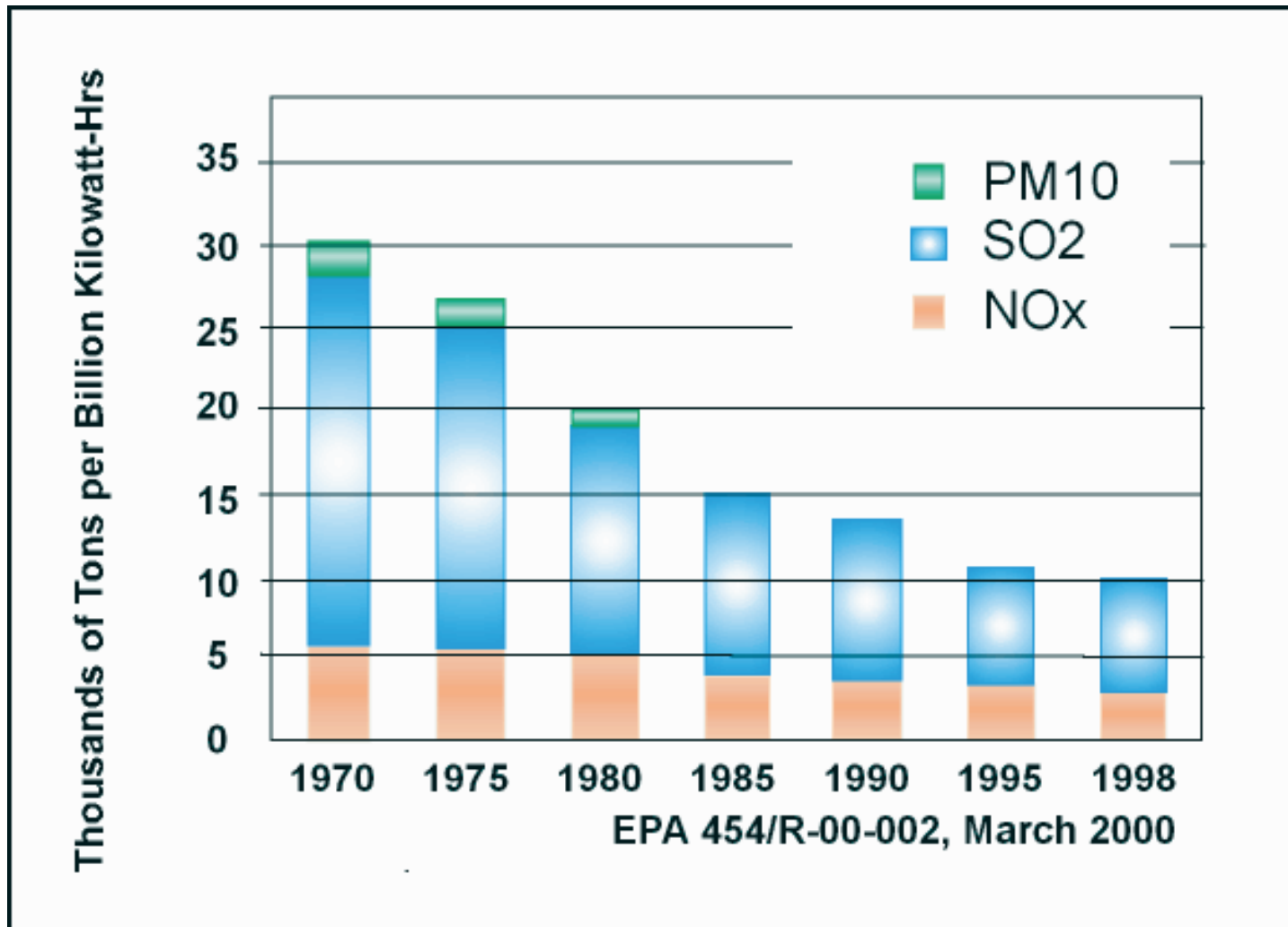




# New Coal Plants Can Be Competitive with Gas

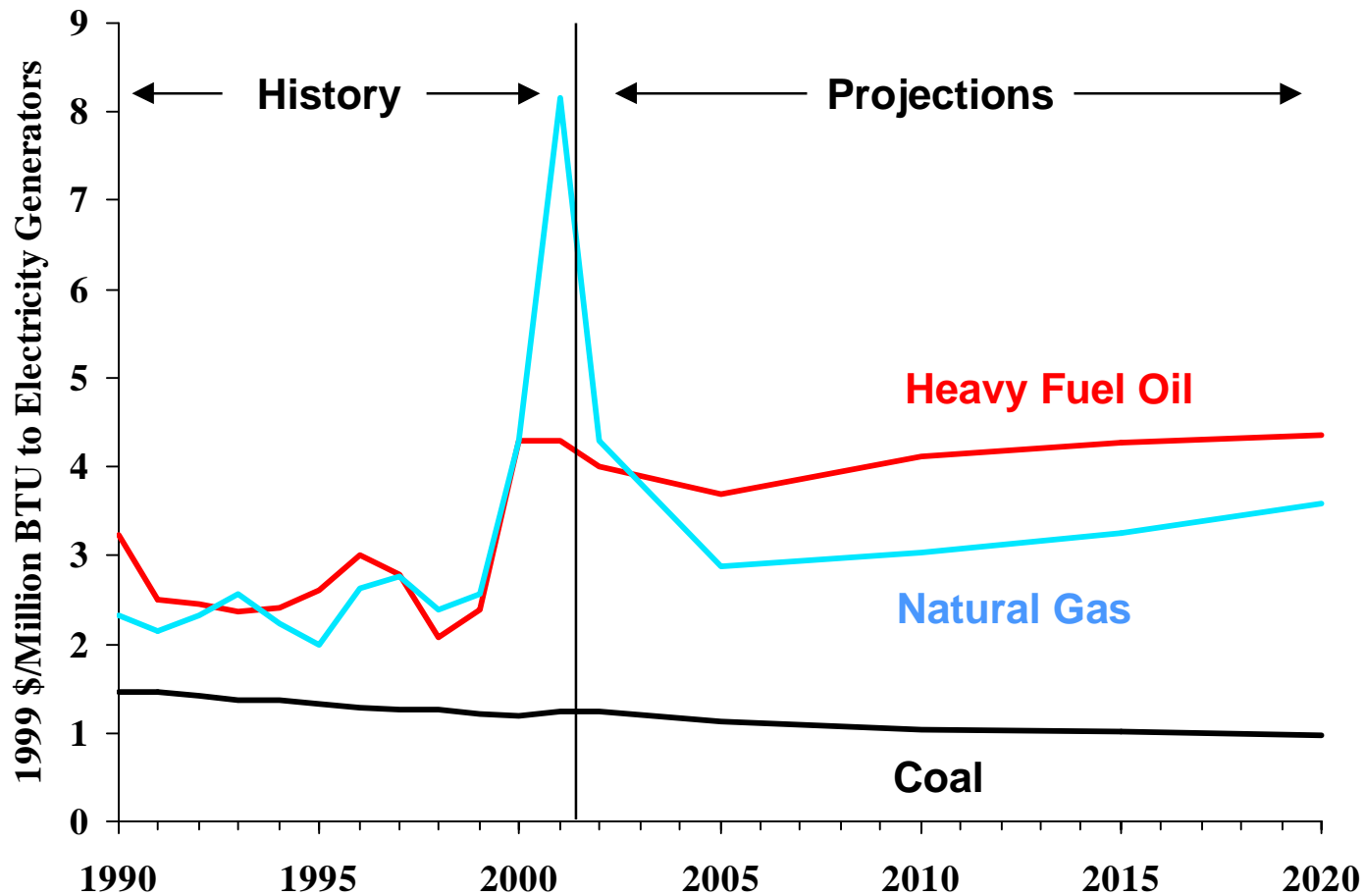


# Coal Technologies Keep Getting Cleaner





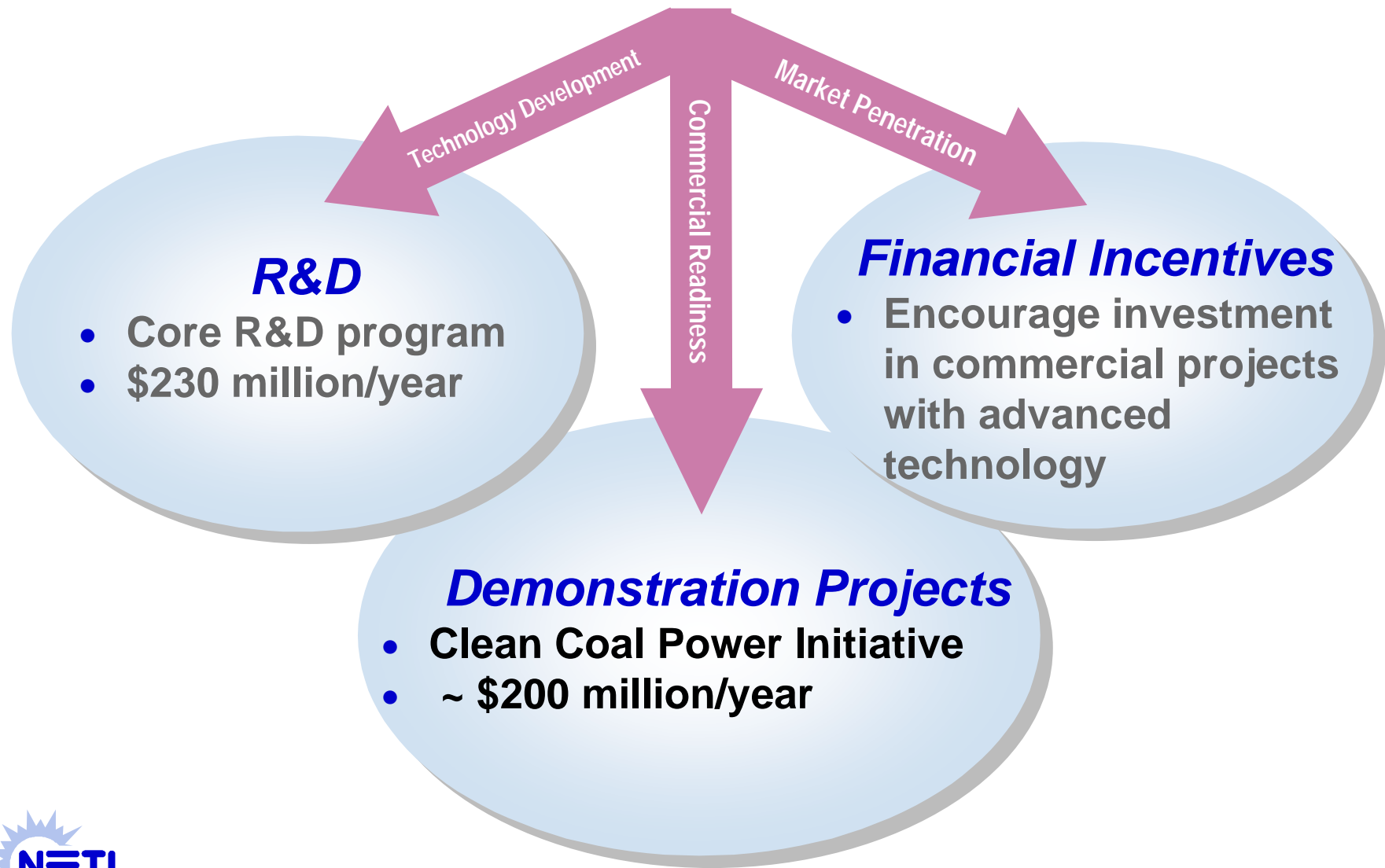
# Stable Coal Prices Erratic Natural Gas Prices



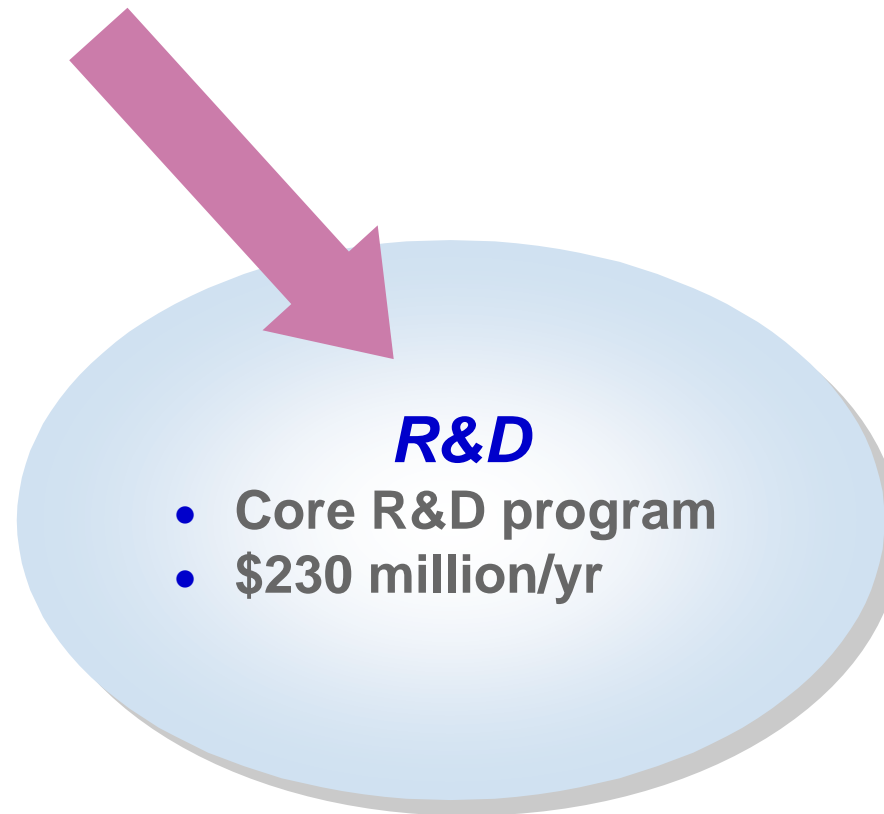
Data Sources: EIA Short Term Energy Outlook, July 2001  
EIA Annual Energy Outlook 2001



# Government's Coal Investment Strategy



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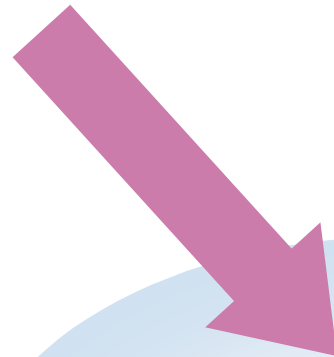
# Core R&D Program Elements

- Environmental Control
- Combustion Systems
- Gasification Systems
- Carbon Sequestration
- Vision 21
- Advanced Research



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# Government's Coal Investment Strategy



## ***Financial Incentives***

- Encourage investment in commercial projects with advanced technology

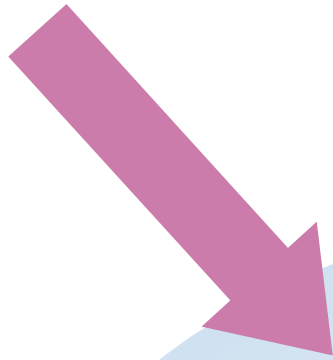
# Securing America's Future - HR 4

- Authorizes \$3.3 billion over 10 years for investing in qualifying clean coal facilities
- Authorizes \$200 to \$300 million per year for core coal R&D program
- Incentives Designed to:
  - Reduce technology risks
  - Reduce operating risks
  - Reduce market risks
- Bill is under discussion in Senate





# Government's Coal Investment Strategy



## ***Demonstration Projects***

- **Clean Coal Power Initiative**
- **~ \$200 million/yr**

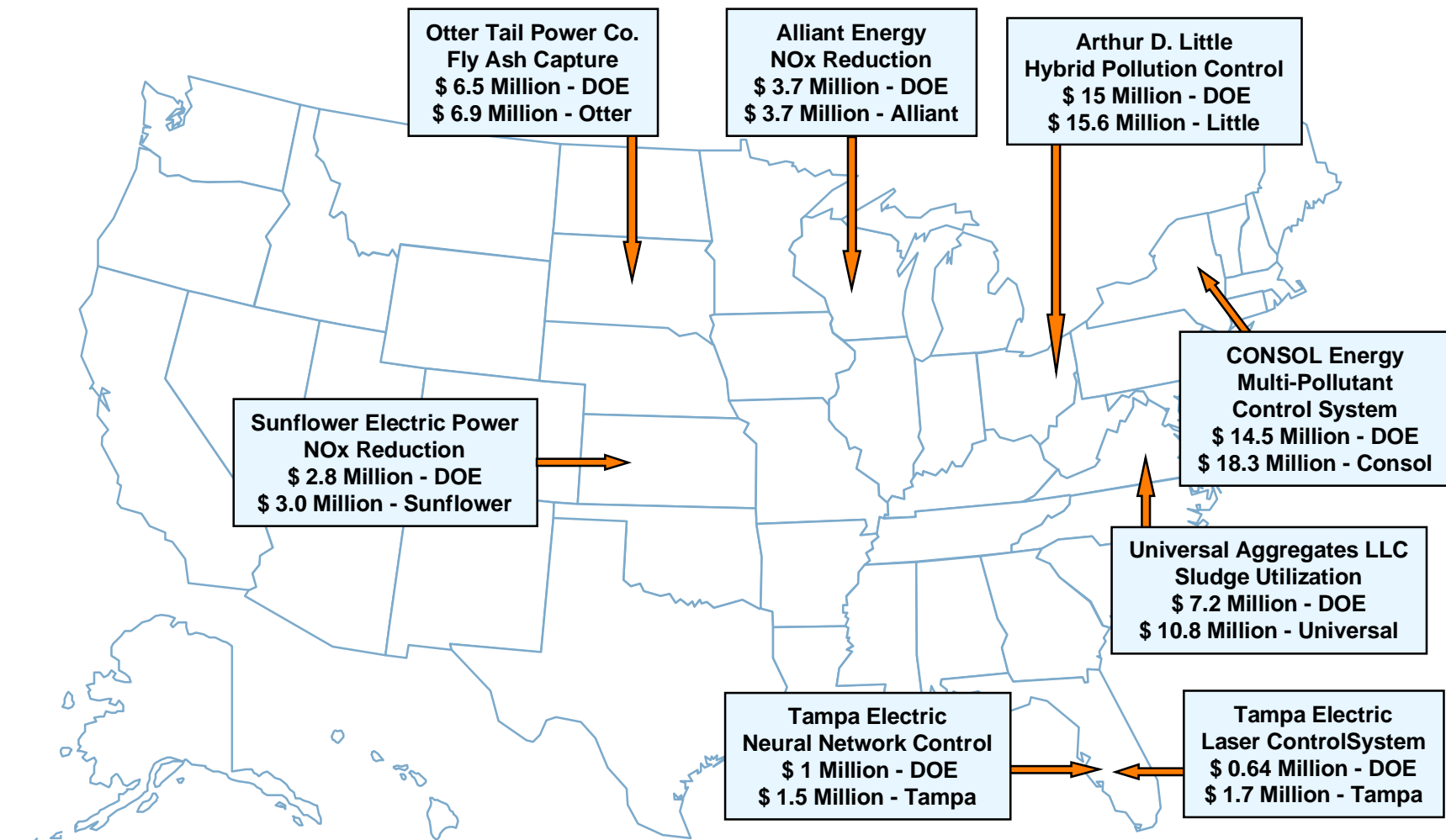
# **Precursor to CCPI**

## **Power Plant Improvement Initiative (PPII)**

- **Precursor to Clean Coal Power Initiative**
- **Congressionally mandated redirection of \$95 Million in FY 2001**
- **Objective: Electricity reliability with near-term technological solutions for coal-fired electric power generation**
- **24 Proposals Received**
- **8 Proposals Selected, > \$110 Million Projects**
  - Emissions control strategies - 5 projects
  - Advanced control schemes - 2 project
  - Waste handling/reduction - 1 project

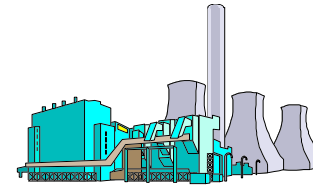


# Power Plant Improvement Initiative (PPII)



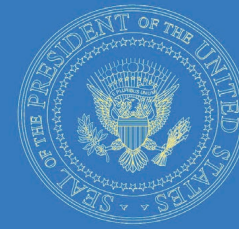
# Clean Coal Power Initiative (CCPI)

- Cooperative, cost-shared program between government and industry to:
  - Demonstrate emerging technologies in coal-based power generation
  - Accelerate technology deployment to commercial use
- Provides early demonstration opportunities for core coal and power RD&D as precursor to Vision 21



Clean, Reliable & Affordable Electricity  
for America's Future

## National Energy Policy



Report of the  
National Energy Policy Development Group

May 2001

***CCPI is a key component of  
the National Energy Policy***



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# **CCPI Congressional Language Key Points**

- **“...demonstrations of commercial scale technologies to reduce the barriers to continued and expanded coal use”**
- **“...demonstrate technologies that can strengthen electricity reliability for the Nation in an environmentally clean manner”**
- **Repayment may be different from clean coal approach**
- **Solicitation released - 120 days**
- **Proposal preparation time -150 days**
- **Project Selections - 160 days**
- **NSR Relief - “Projects selected are considered a Clean Coal Technology Project for purposes of 42U.S.C 7651 of the CFR”**



# Stakeholder Input

- DOE is actively soliciting stakeholder input for CCPI implementation & management via public meetings
- Planning workshop held in September
  - 150 Attendees
  - 70% industry, 15% government, 8% academic & others
  - Break-out sessions on Technology, Markets & Business, Regulatory & Management
  - Post meeting, written comments received from 17 organizations
- All public feedback being used to shape the CCPI and posted on [www.netl.doe.gov](http://www.netl.doe.gov)





## Possible Solicitation Direction

- **Structure solicitation for anticipated \$300 - 400 million**
  - \$30+ million from PPII to be applied to CCPI
  - Congressional permission to use anticipated FY03 funding
- **Include project definition phase**
  - Provides time and money for proposers to finalize financing
  - Drops PPII requirement for firm host site at time of proposal application
- **Allow larger projects**
  - “DOE expects to make two or more awards from this solicitation...”



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## Possible Solicitation Direction

- **Retain coal focus**
  - 75% US-based coal
- **More flexible repayment**
  - Proposer-based, less scripted by DOE
  - Scoring repayment plan
  - Net present value credit
    - Zero repayment for > 75% private cost share
    - Sliding scale for 50%-75% private cost share
- **More detailed public abstracts**
  - Require additional information on project costs, schedules, principal entities



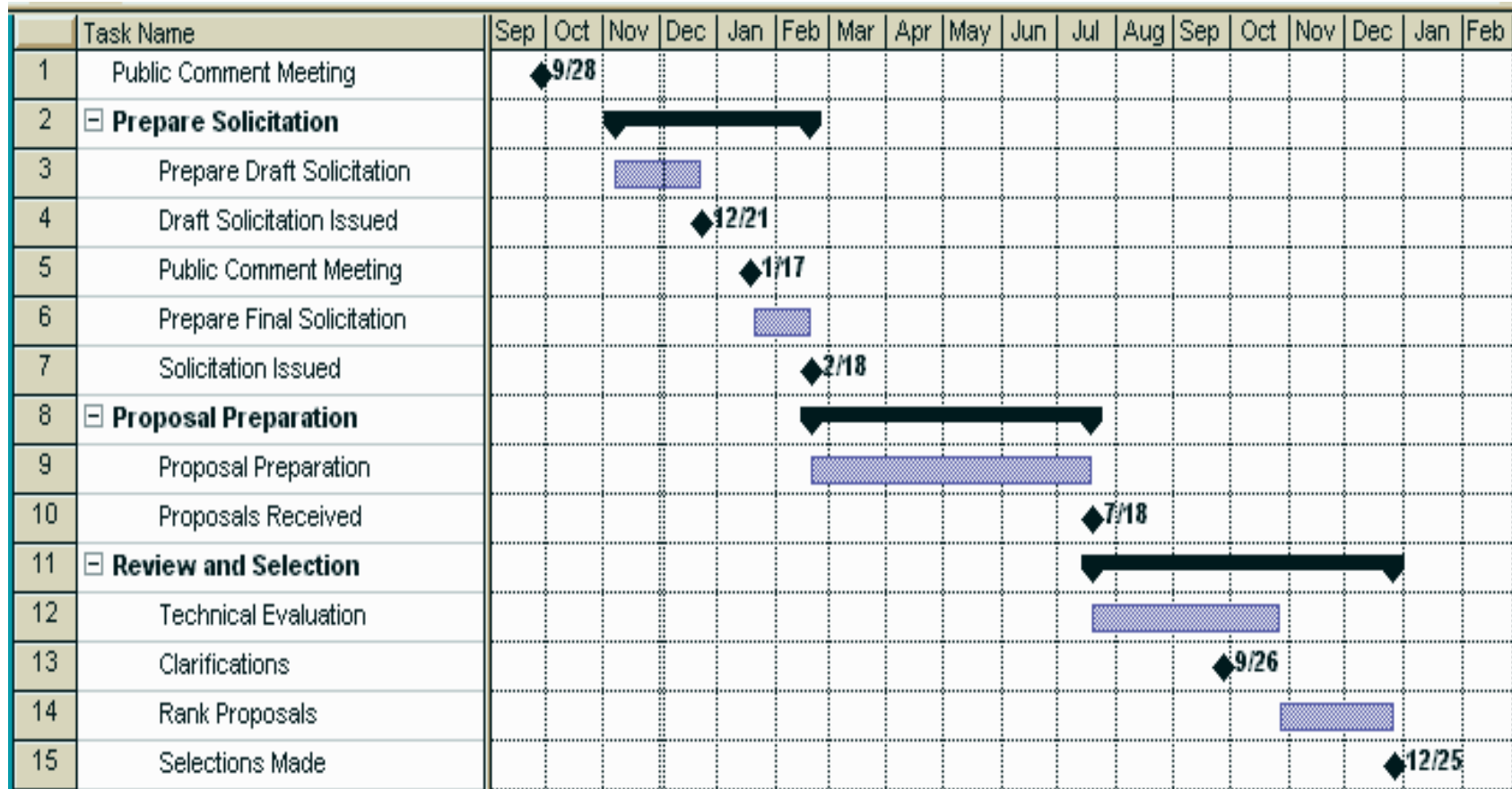
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## Possible Solicitation Direction

- **CCPI Round #1 Objective**
  - Focus on demonstrations of the latest technologies with goal of modernizing the existing fleet of aging power plants
- **Evaluation criteria**
  - Technical feasibility
  - Project feasibility
  - Market impact
  - Environmental performance/benefits



# CCPI Round 1 Solicitation Schedule



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## **CCPI Pre-Solicitation Workshop**

- **Purpose:** To gather input for the planned FY 2002 CCPI Solicitation
- **When:** Immediately following the Clean Coal and Power Conference-today 1:45p.m. to 3:45p.m.
- **You're Invited!**

